

# SBIR / STTR PROGRAMS - A USER'S GUIDE

## INTRODUCTION

This booklet answers frequently asked questions about the Army's **S**mall **B**usiness **I**nnovation **R**esearch (SBIR) and **S**mall **B**usiness **T**echnology **T**ransfer (STTR) Programs. You will find information about:

- [SBIR/STTR Program Overview](#)
- [Army SBIR/STTR Program Structure](#)
- [DoD SBIR/STTR Program Structure](#)
- [Army SBIR Process](#)
- [Army STTR Structure and Process](#)
- [Participating in a Solicitation](#)

For latest information on the program schedules, policy changes, and business opportunities, visit the Army SBIR Web site (<http://www.aro.army.mil/arowash/rt/>) or contact the Army SBIR Program Management Office:

U.S. Army Research Office-Washington  
6000 6<sup>th</sup> Street, Suite 100  
Fort Belvoir VA 22060-5608

Phone: (703) 806-0980  
Fax: (703) 806-2046  
E-mail: [SBIRA@belvoir.army.mil](mailto:SBIRA@belvoir.army.mil)

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## SBIR/STTR PROGRAM OVERVIEW

### *What Are the SBIR and STTR Programs?*

Congress established the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs to provide small businesses and research institutions with opportunities to participate in government-sponsored research and development. SBIR was established in 1982 and has been reauthorized through 2008, while STTR was established in 1994 and is currently authorized through 2009.

The U.S. Small Business Administration (SBA) is responsible for the government-wide SBIR and STTR Programs. The SBA is responsible for developing top-level policy for the programs and reporting SBIR/STTR data and statistics to the Administration and Congress. Each federal agency manages its SBIR/STTR Program separately. The Army participates under the Department of Defense (DoD) SBIR/STTR Program structure.

Essentially, the SBIR/STTR Programs provide seed money for high-tech small business to use in the development of innovative products and technologies. This SBIR/STTR investment results in a technology, product, or service that the government can potentially use, and that the small business or research institution can commercialize outside the SBIR and STTR Programs. During the most recent reauthorization of the programs, Congress strengthened the programs’ emphasis on private sector commercialization of SBIR/STTR developments.

### How Do the Programs Work?

Both programs use a three-phase process, reflecting the high degree of technical risk involved in developing and commercializing cutting edge technologies.

**Phase I** is a feasibility study that demonstrates or determines the scientific, technical, and commercial merit and feasibility of a selected concept. Phase I projects are competitively selected from proposals submitted against annual solicitations. Each solicitation contains topics seeking specific solutions to stated government needs. The Army publishes its SBIR topics in the second of two DoD SBIR solicitations each year, which generally opens in the summer.

The Army likewise publishes its STTR topics in an annual DoD STTR solicitation, which generally opens in January of each year. The Army SBIR/STTR Phase I processes are highly competitive, with about one out of ten proposals receiving awards.

**Phase II** represents a major research and development effort, culminating in a well-defined deliverable prototype (i.e., a technology, product, or service). The Phase II selection process is also highly competitive. Successful Phase I contractors are invited to submit Phase II proposals as there are no separate Phase II solicitations. Approximately 40% of Phase II proposals are selected for award.

In **Phase II Plus**, the Army provides matching SBIR funds (up to \$250,000) and allows for an existing Phase II effort to be extended for up to one year to perform additional research and development.

In **Phase III**, the small business or research institute is expected to obtain funding from the private sector and/or non-SBIR government sources to develop the prototype into a viable product or service for sale in the military or private sector markets.

There are several basic differences between the SBIR and STTR Programs within the above 3-phase structure. The following table compares the two programs.

|                      | SBIR  | STTR  |
|----------------------|---|---|
| <b>Phase I</b>       | <ul style="list-style-type: none"> <li>6 months, \$70,000 max</li> <li>4-month option (at Government’s discretion), \$50k max, to fund interim Phase II efforts.</li> </ul> | <ul style="list-style-type: none"> <li>Six months, \$100,000 max</li> <li>No options</li> </ul> |
| <b>Phase II</b>      | <ul style="list-style-type: none"> <li>2 years, \$730,000 max</li> </ul>  | <ul style="list-style-type: none"> <li>2 years, \$750,000 max beginning in FY04</li> </ul>      |
| <b>Phase II PLUS</b> | <ul style="list-style-type: none"> <li>1 year, \$250,000 max (subject to third-party matching funds)</li> </ul>   |   |
| <b>Phase III</b>     | <ul style="list-style-type: none"> <li>No time limit</li> <li>No SBIR funds</li> </ul>  | <ul style="list-style-type: none"> <li>No time limit</li> <li>No STTR funds</li> </ul>          |

### Who is Eligible for the Programs?

The SBIR Program is open to any small business, defined as a business having no more than 500 employees (including all affiliates), which is operated in the USA and at least 51% owned by a U.S. citizen or permanent resident alien. The small business may subcontract a portion of its work, so long as the small business “prime” performs at least two-thirds of the Phase I work and half of the Phase II work. For the purposes of determining compliance, percent of work is usually measured by both direct and indirect costs; however, the actual method of measurement will be verified during contract negotiations.

The Principal Investigator (“PI”) for each SBIR Phase I and Phase II effort must be primarily employed by the small business, meaning that more than half of his/her time is spent with the small business. Primary employment with a small business precludes full-time employment at any other organization. Any deviations from these requirements must be approved during contract negotiations.

The STTR Program is open to any team consisting of a small business (as defined above) and a research institute. The research institute may be any U.S.-based nonprofit research institution, federally funded research and development center (FFRDC), or university or college. The small business must perform at least 40% of the Phase I and Phase II work. The research institute must perform at least 30% of the Phase I and Phase II work. Up to 30% of the work may be subcontracted.

At the time of award for any STTR Phase I or Phase II contract, the small business must have at least one employee in a management position whose primary employment is with the small business, and who is not also employed by the research institution.

For both programs, the Phase I and Phase II work must be performed in the United States, to include the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and the District of Columbia.

### ***How Do I Get Started?***

A large amount of information about the SBIR and STTR Programs is available on the World Wide Web.

The Army SBIR/STTR Web site (<http://www.aro.army.mil/arowash/rt/>) includes information about both programs, providing Army-specific information not available at other locations. The Army site also includes points of contact and links to the Web sites for participating Army Laboratories and Centers. This site also provides information on past awardees and the Army SBIR Quality Awards Program.

The DoD SBIR/STTR Program Office also maintains a much more comprehensive Web site (<http://www.acq.osd.mil/sadbu/sbir>) providing general information about the programs, as well as all open and upcoming solicitations. This site covers much of the generic information required for effective participation in the Army and other DoD component SBIR/STTR Programs. Each solicitation seeks Phase I proposals against specific topics published in the solicitation. Each open solicitation is posted and contains specific instructions for participating as well as the topics describing specific DoD component needs.

The DoD SBIR/STTR Program Office maintains a Help Desk, which operates year-round. Call (866) 724-7457, or visit the DoD SBIR/STTR Helpdesk online at <http://www.acq.osd.mil/sadbu/sbir/help/index.htm>.

A variety of SBIR/STTR-related conferences are held around the country each year. The two annual national SBIR Conferences provide a broad introduction to the programs, and provide general information about business development, commercialization, intellectual property (IP) rights, and doing business with the government. The locations and dates for these meetings change each year, and are available on the DoD site already cited. In addition, many local, state, and regional economic development agencies host meetings that address the SBIR and STTR Programs.

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## **ARMY SBIR/STTR PROGRAM STRUCTURE**

### ***Who Manages the Army SBIR/STTR Program?***

The Army Research Office-Washington (ARO-W) is the Executive Agent for the Army SBIR/STTR Programs. Although ARO-W handles the day-to-day management of SBIR, STTR is actually managed on a day-to-day basis by ARO's Research & Technology Integration Office. ARO-W coordinates SBIR/STTR activities across the Major Army Commands (MACOMs) and Major Subordinate Commands (MSCs), spanning the Army's research and development efforts.

### ***What Army Organizations Participate in the Program?***

#### **U.S. Army Materiel Command**

Army Research Laboratory (and Army Research Office)

Aviation and Missile Command

Communications Electronics Command

Soldier Biological and Chemical Command

Simulation, Training and Instrumentation Command  
Tank-automotive and Armaments Command

**U.S. Army Test & Evaluation Command**  
Developmental Test Command

**U.S. Army Corps of Engineers**  
Engineer Research and Development Center

**Deputy Chief of Staff for Personnel**  
Army Research Institute

**Army Medical Command**  
Medical Research and Materiel Command

**U.S. Army Space and Missile Defense Command**  
Space and Missile Defense Command

The Army Laboratories and Research, Development and Engineering Centers (RDECs) within the MACOMs and MSCs are responsible for generating SBIR/STTR topics to be included in solicitations, evaluating proposals received against these topics, and for awarding and monitoring all SBIR and STTR contracts.

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## DoD SBIR/STTR PROGRAM STRUCTURE

### *How Does the Army Program fit within the DoD SBIR/STTR Program?*

The DoD SBIR/STTR Office coordinates with nine DoD components to develop and execute coordinated SBIR and STTR solicitations:

- U.S. Navy
- U.S. Air Force
- U.S. Army (Joint Chemical-Biological Defense Program)
- Defense Advanced Research Projects Agency
- Ballistic Missile Defense Organization
- Defense Threat Reduction Agency
- Special Operations Command
- National Imagery and Mapping Agency
- Office of the Director, Defense Research and Engineering

DoD issues three solicitations (two SBIR and one STTR) each year. Although the table below references specific months of the year, all dates are subject to change. It is a good idea to check the DoD and Army SBIR/STTR Web sites for the latest solicitation dates information.

| Solicitation     | SBIR 20xx.1 (e.g., 2004.1) | SBIR 20xx.2 (e.g., 2004.2) | SBIR 20xx.3 (e.g., 2004.3) | STTR 20xx (e.g., 2004) |
|------------------|----------------------------|----------------------------|----------------------------|------------------------|
| *Presolicitation | October                    | March                      | May                        | January                |
| Opens            | December                   | May                        | July                       | March                  |
| Closes           | January                    | June                       | August                     | April                  |

*\*Potential proposers can talk directly to topic authors.*

## **The Army SBIR Program participates in the third (20xx.3) SBIR solicitation.**

The Army is also responsible for executing the Joint Chemical-Biological Defense (CBD) Program. The CBD Program is managed by a DoD organization, with support from the Army, Navy, and Air Force. ARO-W coordinates with relevant Army, Navy, and Air Force laboratories and the Special Operations Command to execute the CBD SBIR Program. The CBD SBIR Program participates in the first (20xx.1) SBIR solicitation each year.

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## **ARMY SBIR PROCESS**

### ***How Does the Army Develop SBIR Topics?***

Each year, the Army Laboratories and Centers develop topics addressing their current missions and priorities. Topics generally are influenced by the Army Science and Technology Master Plan (ASTMP), identified deficiencies in Army programs, and the Army's future operational capability requirements as defined by the Army Training and Doctrine Command (TRADOC). These topics receive a multi-level review, both by the Army and independently at the Department of Defense level by the Office of the Director, Defense Research and Engineering, prior to approval for inclusion in an annual solicitation.

### ***How are Phase I SBIR Proposals Reviewed and Selected?***

The Army conducts a two-tier review of Phase I proposals received in response to a solicitation topic. First, the Laboratories and Centers who "own" the topics perform a thorough technical evaluation and forward a certain number of proposals to the second level of review. A panel of senior Army scientists and technologists reviews the best proposals from the most technically meritorious Army-wide perspective. This process results in the selection of proposals that satisfy Army needs.

After selections have been made, the Laboratories and Centers proceed to negotiate and execute the contracts. Actual contract awards are contingent upon the successful completion of negotiations and availability of SBIR funds.

### ***How do Army Phase I Projects Transition to Phase II?***

All Phase II proposals must be invited by the Phase I sponsoring Laboratory or Center. The invitation is based upon Phase I progress to date and the continued relevance of the project to future Army requirements. Invitations are issued four months after Phase I contract award, with the Phase II proposals due one month later, or five months after Phase I award. Phase II proposals undergo the same two-tier review and selection process as previously described for Phase I proposals.

### ***What Happens Between SBIR Phase I and II?***

The Army has instituted a new initiative to reduce and mitigate the effects of the traditional funding gap between Phase I and II contract efforts. Historically, this gap has placed an undue strain on small businesses with limited resources as they struggle to retain their personnel and facilities while waiting for a Phase II decision. The **Army's Gap Reduction Initiative** has three important features.

- Each Phase I contract has an embedded option, which may be exercised at the Army's discretion to fund initial Phase II activities while the Phase II contract is being negotiated. Phase I options will be exercised only for those Phase II proposals selected for negotiation and award. The Phase I Option may be up to \$50,000, covering a period of up to four months. Therefore, each Phase I proposal must address the Phase I effort (6 months, up to \$70,000) and the Phase I Option to conduct initial Phase II efforts (four months, up to \$50,000).

- Each Phase II proposal is invited four months after Phase I award, and is received about one month before the end of Phase I. The Army has streamlined its two-tier review and selection process, resulting in a maximum gap of one and one-half months between the end of Phase I and the Phase II selection decision (at which time the Phase I Option may be exercised).
- The small business may then begin its initial Phase II activities while negotiating its Phase II contract with the cognizant Army Laboratory or Center. This ensures funding continuity, eases the strain on participating small businesses, and maximizes the potential for successful product development and Phase III commercialization.

### ***What are my Odds for Winning an Army SBIR Contract?***

The Army makes about 350 Phase I and 200 Phase II contract awards each year. About one in ten Phase I proposals, and one in three Phase II proposals, are selected for negotiation and award.

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## **ARMY STTR STRUCTURE AND PROCESS**

### ***Who Manages the Army STTR Program?***

The Army STTR Program mirrors the SBIR Program in many respects; however, the focus is on having the small business partner with a research institution. The most important distinction—that all proposals must be submitted by a strategic partnership between a small business and a research institute—governs the Army STTR structure.

The U.S. Army Research Office (ARO), in Research Triangle Park, North Carolina, oversees the Army's investment in Basic Research, which is generally performed by the nation's research institutions. As such, ARO plans and coordinates the Army's STTR Program.

Like SBIR, the STTR Program spans Army research and development across the Major Army Commands. These are listed in detail above.

ARO is the lead organization for the Army STTR Program, generating most of the solicitation topics and monitoring and executing most Phase I contract awards internally. ARO, representing the Army Materiel Command's STTR interests, coordinates with the other Major Commands

(Medical Research and Materiel Command, Space and Missile Defense Command, Army Research Institute, Army Test and Evaluation Command, and the Corps of Engineers) to ensure their interests are also addressed in each year's topics.

Although ARO performs and manages most STTR Phase I efforts, it delegates a significant number of Phase II contracts to other organizations as the technology moves beyond basic research and towards a well defined product.

### ***How is STTR Different from SBIR in the Army?***

The Army generates STTR topics and reviews STTR Phase I and Phase II proposals in a manner very similar to the SBIR Program. Topics are generated and reviewed internally before a final screening by the Department of Defense. Proposals receive a thorough first level technical evaluation, followed by a senior-level review and selection process. The primary differences between SBIR and STTR are listed below:

- STTR proposals must be submitted by a team composed of a small business (doing at least 40% of the work) and a research institution (doing at least 30% of the work). Any other U.S.-based organization may also participate, but their contribution is limited to no more than 30% of the work. By contrast, SBIR proposals must be submitted by any U.S.-based small business, and can include other (non-government) organizations as long as the small business does at least two-thirds of the Phase I work and one-half of the Phase II work.

- An STTR Phase I is limited to \$100,000 over six months, while an SBIR Phase I is limited to \$70,000 over six months (with a potential option of up to \$50,000 over four months).
- The STTR Program does not employ the SBIR Program's gap reduction procedures.
- An STTR Phase II is limited to \$750,000 over two years, whereas an SBIR Phase II may be for up to \$730,000 over two years.

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## PARTICIPATING IN A SOLICITATION

### *How Do I Get Information About an Upcoming Solicitation?*

You can find early information about solicitations on the DoD SBIR/STTR Web site (<http://www.acq.osd.mil/sadbu/sbir>). The DoD site hosts a **Topic Pre-Release** for about two months prior to the official solicitation opening.

During pre-release, you may talk directly to topic authors to ask specific questions about their topics. The DoD Web site provides topic author names and phone numbers. Telephonic answers to your questions are not allowed once the solicitation officially opens.

### *What if I Have a Question After the Solicitation Opens?*

After the solicitation opens, all questions and answers must be conducted in an open forum to provide all offers with equal access to information. The Defense Technical Information Center (DTIC) hosts the **SBIR Interactive Topic Information System (SITIS)** to facilitate this process. Submit your questions to the SITIS office via the Internet (<http://dtica.dtic.mil/sbir/>) or to the address below.

DTIC MATRIS Office, DTIC-AM  
NAS North Island, BOX 357011  
San Diego, CA 92135-7011

Phone: (619) 545-7529  
Fax: (619) 545-0019  
E-mail: [sbir@dticam.dtic.mil](mailto:sbir@dticam.dtic.mil)

All answers will be posted on the SITIS Web site through the end of the solicitation period. Answers will also be sent to the submitter of the question via E-mail or Fax if return information is provided (no regular mail responses will be provided). Answers are generally posted within seven working days after question submission.

### *How Do I Ensure My Proposal Meets Army Specifications?*

The Army provides specific instructions for proposals responding to an Army topic. These instructions are contained in the introduction to the Army section of each DoD SBIR/STTR solicitation. The Army SBIR/STTR Web site (<http://www.aro.army.mil/arowash/rt/>) also provides these instructions. The Web site and Army introduction also provide information about where to send your proposals and the schedule for review and selection of Phase I proposals.

### *What if I Have Never Done Business with the Government Before?*

Any qualified small business may compete in an Army SBIR/STTR solicitation, and all offers will be treated equally and fairly. As with any business endeavor, you should strive to understand your potential customers and their requirements. However, there are several features about doing business with the Government in general that you should be aware of.



- You should make plans for having adequate working capital to weather potentially significant delays between invoicing and receipt of payment. Also, even though the Army has taken great strides to reduce the gap between Phase I and Phase II efforts, you may still experience a gap of from one to two months.
- Phase I contracts do not place any restrictions on your corporate accounting structure, because they are generally fixed price in nature and are relatively small. However, you should be aware that a Phase II contract, because of its size and structure, requires that you meet the requirements of the Defense Contract Audit Agency (DCAA). DCAA ensures that a company's cost structure and accounting methods meet the Government's requirements. This ensures that a submitted cost quote and invoices resulting from a contract effort are accurate, reliable, and acceptable.
- The SBIR/STTR Program places great emphasis on the commercialization of any projects it sponsors. You must be prepared to demonstrate your commitment to Phase III commercialization in your proposals and during your contract efforts.
- All Army SBIR/STTR awards are subject to the successful completion of negotiations, and the availability of SBIR/STTR funding.
- All businesses must be registered with the DoD's Central Contracting Registration system (<https://www.ccr.dlis.dla.mil>).

## ADDITIONAL INFORMATION AND ASSISTANCE

### *U.S. Army*

The **Army SBIR/STTR Web site** (<http://www.aro.army.mil/arowash/rt/>) provides information about participating in the SBIR/STTR Program.

Information about the Army's **Acquisition Programs**, managed by Program Executive Officer's and Program Managers, is also available at the SARDA Web site (<https://webportal.saalt.army.mil/>).

The Army **Small and Disadvantaged Business Utilization Office** promotes and assists small businesses, small disadvantaged businesses, women-owned small businesses, and Historically Black Colleges and Universities and Minority Institutions seeking opportunities within the Army. Information about this organization is available online (<http://www.sellingtoarmy.com/>).

### *Department of Defense SBIR/STTR Program*

The **DoD SBIR/STTR Web site** (<http://www.acq.osd.mil/sadbu/sbir>) provides information about participating in the programs, responding to solicitations, and past program awards.

The **DoD SBIR/STTR Help Desk** provides information about solicitation, proposal preparation, doing business with the government, intellectual property protection, and other program-related areas. The Help Desk is available at (866) 724-7457, or visit the DoD SBIR/STTR Helpdesk online at <http://www.acq.osd.mil/sadbu/sbir/help/index.htm>.

The **Defense Technical Information Center** (DTIC) provides information services to assist SBIR/STTR participants. These services are available at no cost for the SBIR and STTR Programs:

- Online Technical Information Package System (OLTIPS), which provides bibliographic listings of DoD-funded work related to a topic, are prepared for the majority of SBIR/STTR topics. They are available online (<http://www.dtic.mil/dtic/sbir>).
- STINET, an online technical database, can be accessed to search for DTIC documents in your area of interest.
- Although full text documents are available online, SBIR participants may receive 10 hard copy documents at no cost.
- DTIC operates the online SBIR Interactive Topic Information System (SITIS) for each DoD SBIR/STTR solicitation. You may access SITIS to pose a specific question about a topic, and view all questions and answers given, by visiting SITIS (<http://dtica.dtic.mil/sbir/index.html>) or by contacting the SITIS office at (619) 545-7529, Fax (619) 545-0019, or via E-mail



([sbir@dticam.dtic.mil](mailto:sbir@dticam.dtic.mil)).

## Small Business Administration

The Small Business Administration (SBA) coordinates SBIR/STTR activities for all participating agencies and publishes quarterly Pre-Solicitation Announcements. Visit the SBA's SBIR/STTR Web site, (<http://www.sba.gov/sbir>) for general information about the programs, agency pre-solicitation announcements, tips on proposal preparation, and more.

The SBA provides general information helpful to small businesses at its main Web site (<http://www.sba.gov/>). Here you can access information about financing, state small business development agencies (many of which provide assistance to SBIR/STTR participants), doing business with the government, and other available resources.

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